

American

AUGUST

1948

FRUIT GROWER

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AMERICAN FRUIT GROWER

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AUGUST, 1948

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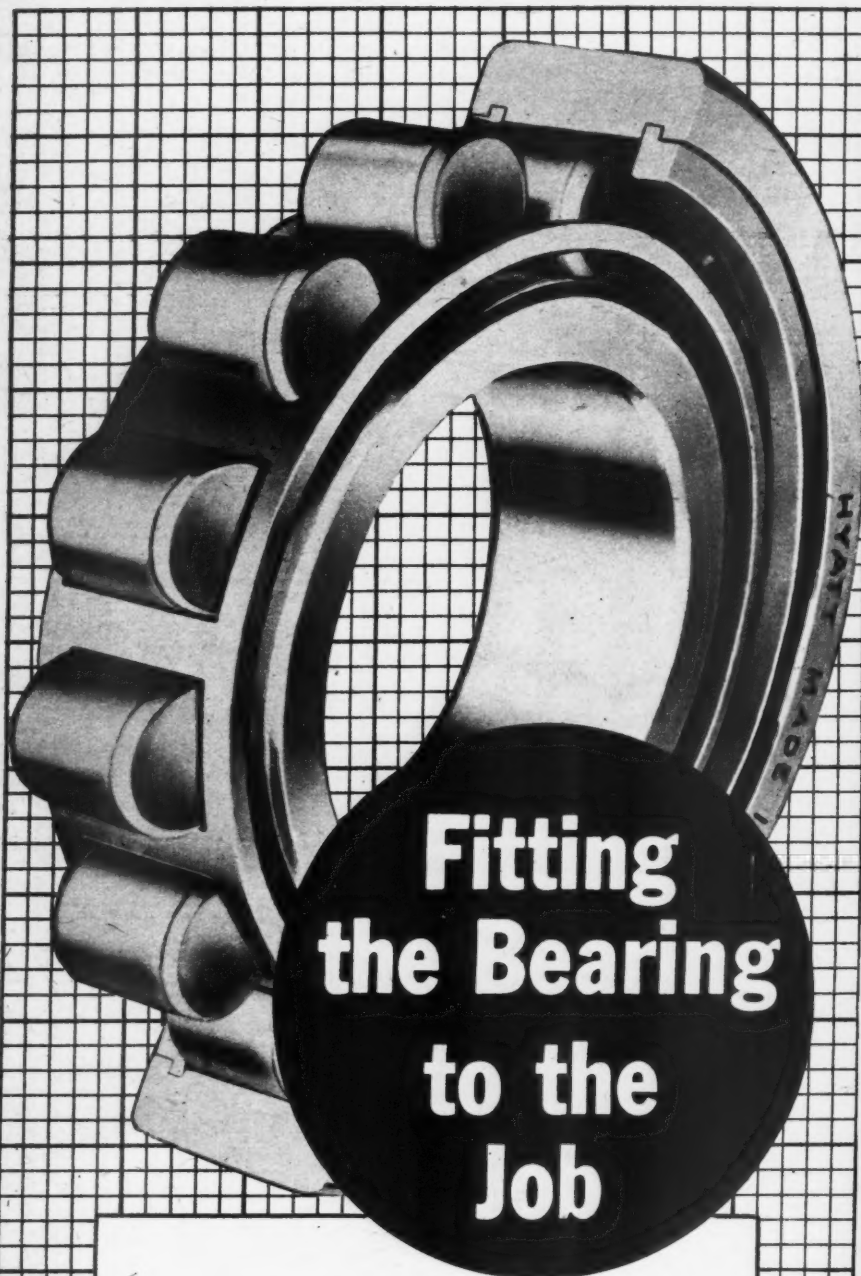
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AUGUST

1948

VOL. 68

No. 8

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THIS MONTH'S COVER

On our cover this month are the large, handsome fruits of the Eldorado blackberry. The variety takes its name from the town of Eldorado, Ohio, near where it was discovered in 1880 as a chance seedling.

AMERICAN FRUIT GROWER

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AMERICAN FRUIT GROWER

LETTERS TO THE EDITOR

Improving Retail Fruit Sales

Dear Sir:

IN AMERICAN FRUIT GROWER for June, I read with interest the panel discussion on "Marketing as I See It." There seemed to be general agreement as to the need for improving retail merchandising of fruits. However, I did not note any discussion of how grocers could be stimulated to improve their operations.

The United Fresh Fruit and Vegetable Association believes it is necessary to show the grocer how he can make more money from his fruit and vegetable department by using modern merchandising methods. With this in mind, the United Merchandising Institute was formed to persuade grocers by demonstration in the classroom, that they can get more profit out of their stores by following certain fundamental merchandising principles.

Does it work? Grocers say it does. We have filed hundreds of signed reports from grocers with the U. S. Department of Agriculture, which co-operates with the Association in providing free classes for retailers.

Here is a typical report from a grocer: "Purchases for the month before attending the class, \$977.62; purchases for month after attending the class, \$1,434.91." The grocer also said that most of this increase is due to better handling and display learned at the school. His increase is 47 percent. The average increase reported is around 30 percent.

Here is the answer to how retail merchandising of fruits and vegetables can be improved.

United Fresh Fruit and Vegetable Assoc.
Washington, D.C.

R. S. Seelig

Reader's Views On Marketing

I read the many suggestions on marketing fruit in your June issue. Of course, the first essential is good quality, the next essential is a reasonable price which should be based on the supply and the industrial situation.

Farmers must use their own best judgment in the amounts to produce and the price to ask. We cannot rely on our government at Washington which is \$251 billion in debt and at the same time has thousands of men and women on the payroll to pay a political debt.

Garrettsville, Ohio

C. H. Loomis

Application Of DDT To Peaches

Dear Sir:

In regard to the item under peaches on page 27 (AMERICAN FRUIT GROWER, April, 1948) I have found that the simplest method of applying DDT for peach tree borer is to attach a flour sack containing 50 percent powder to a stick and bang the tree trunks in late August and mid September. My orchard was infested with peach tree borer, and I cannot find any now.

Summerland, B.C.

A. N. Gardner

If a sprayer is available, just as good and more economical control can be achieved by spraying than by this method of dusting. Not only is the spray more effective against the moths, but it withstands weathering better than dust or powder. Another point in favor of spraying is that the insecticide

will be more evenly applied by spraying.
—Ed.

Power Take Off

Dear Sirs:

I would like to hear what other growers have to say about the merits and demerits of the power take off used as a source of power in tractor spraying. The only drawback that I can see is that while the clutch is being engaged or disengaged, the pump is idle. That can be overcome if the tractor manufacturers would cater to the orchardist and take the power for the p.t.o. drive shaft from a position ahead of the tractor clutch. I think they would do this if sufficient demand were made.

Colborne, Ont.

J. Leonard Bradford

DN-III For Red Mite

Gentlemen:

With all the new spray materials coming out these days it is hard to keep up with the latest ones and their uses. I wonder whether or not DN-III is recommended for controlling red mite on peaches?

Painesville, Ohio

Ford Quigley

Yes, this is one of the newer recommended uses for this chemical—"1¼ pounds in 100 gallons of spray when two or three mites appear per leaf in summer but not earlier than four weeks after petal fall on peaches."—Ed.

Pollination Problems

Gentlemen:

I have a solid block of McIntosh and Northern Spy which are planted in alternate rows. This year I observed that the McIntosh had finished blooming before the Spy trees started to bloom. Now I wonder whether or not the two have been sufficiently pollinized.

In the next few years should I top-work another variety into the trees or should I plant another variety of trees among the McIntosh and Spy?

Holly, Mich.

Jean Friedland

Since the McIntosh and Northern Spy ordinarily do not bloom at the same time, and since both are considered to be self-unfruitful, they will both need pollination from another variety. There are two possible ways of achieving this, either by interplanting trees of the pollinating variety, or grafting branches of the pollinators into the present trees. If new trees are planted, some of those now growing will have to be removed and it may be four or five years before the new ones will become effective pollinizers. The quickest way would be to graft pollinizing varieties into some of the trees. A good variety for the McIntosh is Golden Delicious, and Rome Beauty is suggested for Northern Spy.—Ed.

Gentlemen:

In your May, 1948 issue you stress the importance of pollination and point out that trees must blossom at the same time for different varieties to pollinize each other. I planted a young orchard of Bartlett, Bosc and some Seckel pears last spring and wonder whether they will pollinize each other, since the Bartlett is a summer pear and the Bosc is a winter variety. Also, what variety should I plant to pollinize the Seckel tree?

Bridgman, Mich.

Stephen Kamp

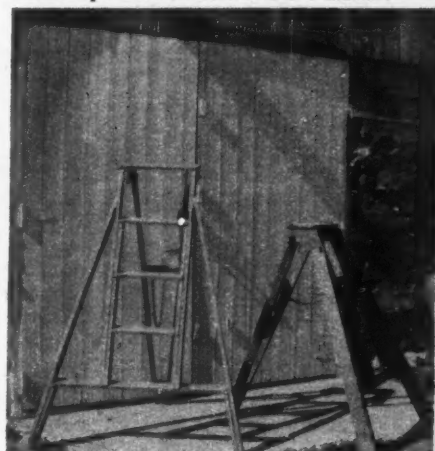
The season of maturity of the fruit bears no relation to the time of blossoming. The blooming periods of Bosc and Bartlett

overlap sufficiently for them to pollinize each other, and the Bosc pear will pollinize the Seckel. But Bartlett and Seckel are inter-sterile and will not set fruit without another pollinizer, such as Clapp, Howell, Bosc, or Clairgean.—Ed.

More On Safe Picking Ladder

Dear Sir:

Because I have had so many inquiries from AMERICAN FRUIT GROWER readers about the extra-strong and safe picking ladders that we build for our orchard, I am sending you a picture that shows the construction of them better than the one used in the April issue Letters to the Editor.



The ladders that are shown are 4 and 5 feet high, and we find them excellent for peach harvesting. Eight-foot ladders, made the same way, are used for apples.

The 4-foot ladder weighs about 28 pounds, and was used through the whole picking season by a man who weighs about 225 pounds. It is still in good condition.

In making the ladders we prefer basswood or western fir. We do not like to use white pine because it tends to decay too quickly at the joints. We have a 7-foot basswood ladder that has been in constant use for the last 12 years, and it has just now shown need of repair.

Riverdale, Mich.

Martin Joiner

For a mimeographed copy of Reader Joiner's instructions for building this ladder, readers may send a self-addressed, stamped envelope to AMERICAN FRUIT GROWER.—Ed.

Reader Seeks Facts On Apple Juice Production

Dear Sirs:

We would like to know about all phases of apple juice production, including bottling, allowed bacteria count, preservatives, and methods which will comply with the Federal Food and Drug Act. We are interested in anything involved in putting this product on the market.

McNabb, Ill.

Ernest M. Halbleib

Two excellent bulletins on the subject are "Apple Juice Preparation and Preservation" by Roy E. Marshall, Circular Bulletin 206, Michigan State College, East Lansing, Mich.; and "Pasteurization of Apple Juice," by D. K. Tressler and C. S. Pederson, Circular No. 181, Rev. 1941, New York State Agr. Expt. Sta., Geneva, N.Y. Methods which comply with Federal regulations are described. However, if you desire full information, in legal terminology, regarding the Federal Food, Drug, and Cosmetic Act, a copy may be purchased from the Superintendent of Documents, Washington 25, D. C., for 15 cents. The Act deals chiefly with the adulteration and misbranding of food.—Ed.

When
apples
drop
prematurely...

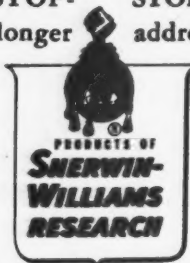
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AMERICAN FRUIT GROWER

OFF-GRADE APPLES MAKE THE GRADE

Growers' Co-op Spurs The Apple Juice Industry With A Superior Quality Product

By ELDON S. BANTA

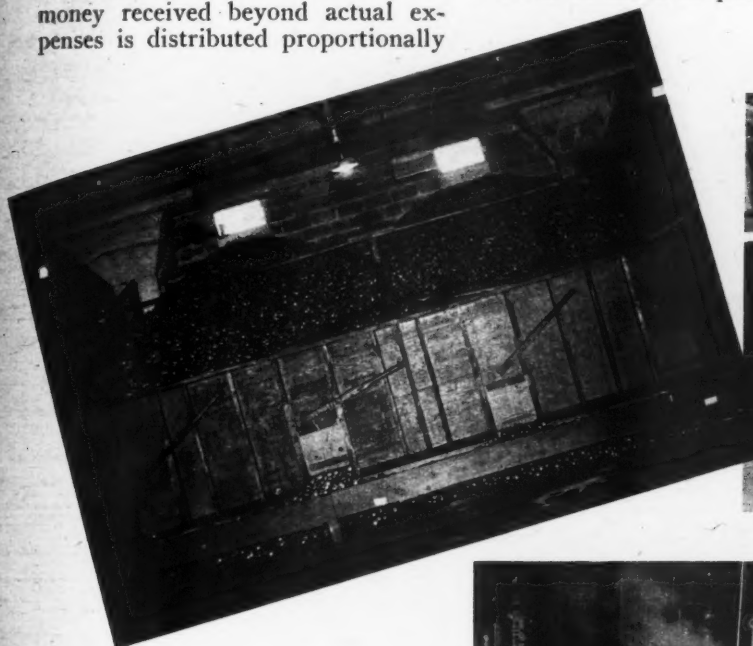
"WE BUILT our juice plant so we could profitably dispose of the off-grade fruit from our orchards," says Robert Frecon, secretary of the Chambersburg Fruit Co-operative Association in the heart of the large apple area of Southeastern Pennsylvania. The organization is 100 percent co-operative, using only fruit from its members' orchards. All money received beyond actual expenses is distributed proportionally

Pa., just north of Chambersburg. Growers subscribed from \$100 to \$10,000 each to get the co-operative started. They felt certain that only prime, number one fruit would command top fresh market prices in the very near future, so they wanted to sell their off-grades in the form of a high-quality product. Moreover, they wanted as much as possible of the

consumer's dollar to come back to them. Thus, on February 11, 1946, the Chambersburg Fruit Co-operative Association was incorporated with 25 members. Now its membership has risen to 136 and promises to increase.

The Association officers, who have served since the beginning, should be credited with foresight and sound business management. They are: J. H. Karns, Chambersburg, president; Robert Frecon, Chambersburg, secretary; and D. R. Koch, Chambersburg, treasurer. The board of directors includes S. A. Heisey, Greencastle; F. M. Hess, Waynesboro; D. R. Duke, Chambersburg; and Roy Hafer, Fayetteville.

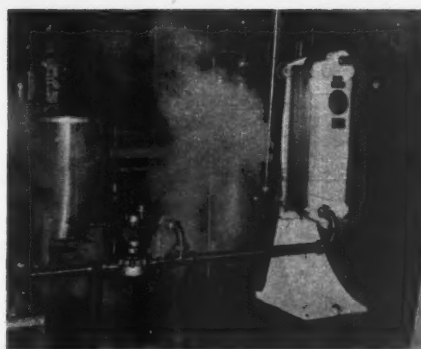
The first job was to locate a site and build the plant. For this purpose, the little town of Scotland was ideally situated, providing a good railroad siding and plenty of fresh water. Here in 1946-47 the Association built its three-story reinforced concrete structure 70 by 200 feet, with 42,000 square feet of floor



Above left—Sorted apples await pressing.
Above—Hydraulic press takes 85 bushels.
Left—Pasteurizing prevents fermentation.

among the grower-members. Juice is the only product made, since it competes the least—for that matter hardly at all—with apples on the fresh market.

It took \$200,000 of growers' hard-earned cash to build the three-story plant at Scotland, Franklin County,



Below—Talking over the business in the office of the Chambersburg Fruit Co-operative Association are, left to right: Robert Frecon, secretary; Robert W. Fahnestock, bookkeeper; D. R. Koch, treasurer; and Raymond L. Shenk, plant manager.



space. The plant was built to fit the machinery. The planners knew about how much juice they wanted to produce in a season and the amount and size of equipment necessary to do it; thus, they built accordingly.

There are no other juice plants in the area, so the growers have great expectations for the success of the venture. The present membership spreads out in a radius of about 75 miles, reaching into Maryland's big apple section surrounding Hancock.

The plant is operated for about five months of the year, from October to February, and in the surrounding area there is ample storage space for almost 1½ million bushels of fruit which could keep the plant running even longer.

Production will run to some
(Continued on page 20)



DOES PEACH IRRIGATION PAY OFF?

**South Carolina Growers Point
Out Some Interesting and
Significant Facts**

By A. M. MUSSER, Clemson Agricultural College

THE DRY 1947 SEASON in the Piedmont area of South Carolina and the dry 1945 and 1948 seasons in the Ridge Springs-Johnston area have caused many growers to think about irrigation and wonder whether the cost of equipment would be a profitable investment. These growers are watching with intense interest the results which have been and are being obtained by a few pioneers in this field.

From 1886 through 1938 the average rainfall for South Carolina has been 47.96 inches. The average seasonal amount during the same period of time has been: winter, 11.3 inches; spring, 10.69 inches; summer, 16.3 inches; and fall, 9.4 inches. This shows a rather good yearly average distribution. Unfortunately, the average amount does not fall each season and practically every year some peach-growing section in the state has dry periods of varying length and intensity. The Spartanburg area in most years receives summer rains at the proper time to size the Elberta crop, but in many seasons too little rain occurs to swell early peaches to profitable size, two inches or larger in diameter.

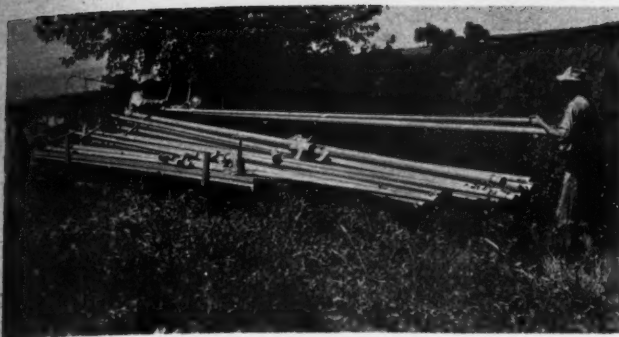
During the 1947 season, dry weather occurred in most of the peach areas preceding the Elberta crop, and most growers had to ship small peaches. 'Small Elbertas' from South Carolina followed many small Georgia peaches, which lacked good size for the same reason, thereby putting too many little peaches on the market with a consequent reduction in price. In the three main producing sections in South Carolina—Piedmont, Ridge Springs-Johnston, and Sandhills—a drought occurs in April or May or, occasionally, early in June, which seriously reduces the size of early peaches in most years. The earliest ripening varieties, such as Mayflower, Dixired, Redhaven, etc., normally produce medium to small size fruits unless rather heavily thinned. However, if water could be applied to these early-maturing blocks of peaches, much improvement in color, size, and quality would result, and this has been the experience of the few growers who have irrigation equipment.

Most orchardists who grow early maturing varieties also grow Elbertas, and a smaller number grow a few varieties that mature after Elberta.

Guy Ballenger at Greer, S. C., has

been doing some irrigation off and on for the past 10 to 12 years. He has been practicing surface irrigation, using heavy iron pipe which delivers water to the ends or middles of rows, depending upon the slope of the land, and then directs the water the full length of the tree rows. Mr. Ballenger is very well satisfied with the success he has had so far, but the heavy pipe requires more labor to move as well as to direct the water during irrigation than the newer systems. Then, too, the water on his terraced lands cannot be as uniformly distributed over the entire surface by this method as is the case with the more modern portable systems. Mr. Ballenger is able to irrigate only a part of his orchard, most of which is planted to the Elberta variety. However, for two years he has prevented cracking of the peaches which he could irrigate, and he estimates that the reduction in cracked peaches due to a more uniform supply of water during those two seasons has more than paid for his outfit. In addition, he has been able to increase the size of the fruit from 1½ and 1¾ inches to 2 inches and up. In this orchard the water is pumped ¼ mile to the nearest side of

AMERICAN FRUIT GROWER



Above left and right—Portable aluminum sprinkler pipe is easy to unload and move.

the orchard, and 3,000 feet further in the orchard is as far as the system extends. Depending upon weather conditions, he has irrigated, at various times, during the ripening period and as near harvest time as the day before picking started.

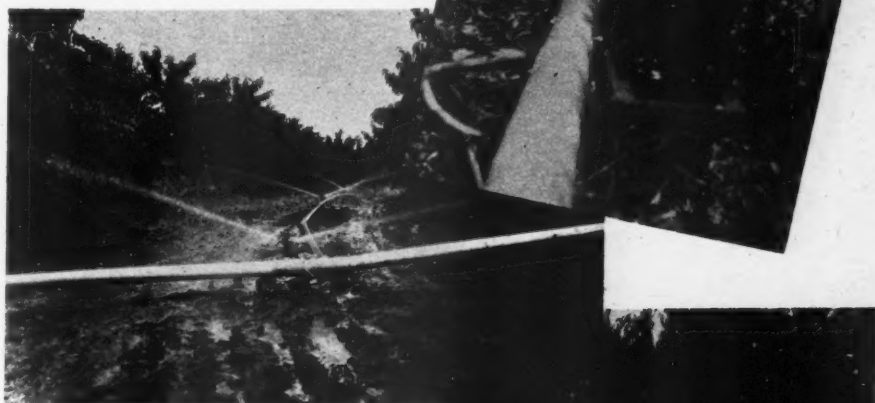
Major H. C. Moore of Gaffney began to irrigate his peach crop in 1947. He has two blocks of Elbertas, one consisting of 22 acres which is irrigated from a reservoir or pond that is fed from a small stream, and one of 30 acres which is irrigated from a creek located near one end of the orchard. Last season he irrigated the 22-acre block twice; the first time when the pits and seeds were being formed and matured and the second time about two weeks before harvest began. Seventy-five percent of the fruit from this block reached $2\frac{1}{2}$ inches, and 25 percent graded $2\frac{1}{4}$ inches and up. In previous years he had seldom been able to produce good-sized fruit in this block even with fairly severe thinning, and in some years the fruit averaged $1\frac{3}{4}$ inches in diameter.

The 30-acre block was irrigated about two weeks before harvest, and the whole crop averaged 2 inches to $2\frac{1}{4}$ inches in size with less than the customary thinning. Major Moore states that he received a premium price on every car he shipped in 1947, and estimates that his equipment was more than paid for by the increase in price he received for this one year. In addition to the advantages listed above, he obtained a better bud set at the beginning of the 1948 season than 99 percent of the growers in the Piedmont area.

Major Moore irrigates $1\frac{1}{2}$ acres at a time, pumping 300 gallons per minute, but he has now purchased additional equipment so that two acres can be irrigated at the same time. He states, however, that as soon as possible he plans to obtain enough pipe to irrigate five acres, since the same amount of labor can be used to handle five acres as is required for the smaller acreage.

Major Moore and other growers who have irrigation systems have either portable galvanized iron or aluminum pipes. Most of the sprin-

kler systems have risers in every other pipe joint, which places them 40 feet apart, and the lateral lines are placed in every other middle which also places them 40 feet apart. Most sprinkler heads used are low-angle, revolving sprinklers designed especially for the orchard.



Above right— $2\frac{1}{2}$ " Centrifugal Pump with power unit and 5" aluminum pipe from pump.

Above—Lateral line through peach orchard.

Major Moore estimates the operating cost of applying one inch of water per acre at \$1.50 for gasoline and \$1.20 for the labor of the two men who move the lateral lines.

David E. White of McBee also began irrigating peaches in 1947. His orchards are planted on a deep, sandy soil which absorbs water at a more rapid rate than the heavier Piedmont soils. At present, Mr. White is growing Dixigem, Goldeneast, Fair Beauty, and Elberta varieties, a total of 110 acres, all of which can be irrigated. In his section, a three to six weeks drought occurs in approximately seven years out of ten between early May and late June. During this period his early peaches are maturing and need large amounts of water.

The Fair Beauty variety was irrigated twice in 1947—two weeks before the pit hardened and three weeks before harvest. The fruit graded 2 inches to $2\frac{1}{4}$ inches and top prices were received for all cars. Non-irrigated fruit reached only $1\frac{5}{8}$ inches to $1\frac{7}{8}$ inches in diameter. The Elbertas received one irrigation in May and, at harvest, County Agent Willis measured the fruit from irrigated and non-



Low angle revolving sprinkler on main line.

irrigated trees. From the irrigated trees the fruit ran one-third 2 inches to $2\frac{1}{4}$ inches and two-thirds $2\frac{1}{4}$ inches and up, while from the non-irrigated trees one-fourth of the fruit measured $1\frac{3}{4}$ inches to 2 inches, one-half 2 inches to $2\frac{1}{4}$ inches, and one-fourth $2\frac{1}{4}$ inches and up.

Mr. White's water supply is almost a mile from his orchard. Although this greatly increased the original cost of the equipment, he says it is profitable because: (1) size, color, and quality of fruit are considerably improved and are reflected in the higher price received, and (2) his trees make more growth and produce a larger quantity of fruit. Of course, as

(Continued on page 18)



Left—One of 10 top Oklahoma seedlings in 1947 contest.

Above—Nugget has superior cracking characteristics.

"BACKYARD" PECANS MAY YIELD SUPERIOR VARIETIES

Oklahoma Growers Are Offered Cash Prizes For Outstanding New Pecan Trees

By FRED LeCRONE, Oklahoma A. and M. College

NATIVE PECAN trees abound in Oklahoma, and pecan growers of that state are searching carefully to find among the native trees a few excellent specimens which are worth naming and propagating. Efforts to find these trees which bear superior types of nuts are encouraged by operators of pecan shelling plants, horticulturists at Oklahoma A. and M. College, and by the Northeast Oklahoma Pecan Growers' Association who sponsor, jointly, an annual prize contest for outstanding new varieties and a sweepstakes grand prize award to be given when the one superior pecan is found.

On the basis that "the perfect variety is yet to be discovered," growers are urged to examine the trees in their own backyards to find the really excellent types which will be able to compete in the annual contest program which includes an area of about 30 counties in northeastern Oklahoma and southeastern Kansas. The annual competition is meant to single out likely looking trees on the basis of

the nuts they bear, and then the 10 best nuts in each annual contest are entered automatically in the sweepstakes contest for which a check on the bearing habits of selected trees is kept over a period of years.

Prizes for the annual contest range from a \$50 first prize downward, and the sweepstakes award will be \$1,000. Growers find that it is worthwhile to get accurate production records on trees which bear good nuts so they will be eligible for entry in the competition.

To enter a tree in the contest, its exact location and identification must be given, and a 3-pound sample of nuts sent to the department of horticulture of Oklahoma A. and M. College. November 25 is the deadline date for entering trees each fall. Three members of the horticulture department and a committee of commercial cracking plant operators are the official judges.

Each sample of nuts is processed to determine its adaptability for commercial cracking. Cracking nuts

should be small as compared to other varieties. The best size seems to be from 85 to 100 nuts per pound. More important than size, however, is the percentage yield of kernels, color of kernel, the yield of whole kernel halves, shape of the nut, ease of cracking, and the manner in which the kernels separate from the shells. The Nugget variety is an example of the type of nut desired. This tree, however, is not too well adapted to this area, since it matures its crop a little late and is not too reliable as a producer of regular crops.

Once a tree is entered in the sweepstakes contest, it is placed under close observation. Members of the judging committee visit it to check its location, size, the soil in which it is growing, and any other items of importance such as evidences of resistance to disease, time of nut maturity, growth habits, and bearing characteristics. Scion wood is also obtained for a top-worked test block where all trees in the contest can be observed

(Continued on page 22)

AMERICAN FRUIT GROWER

HISTORY OF HORTICULTURE

QUINCES

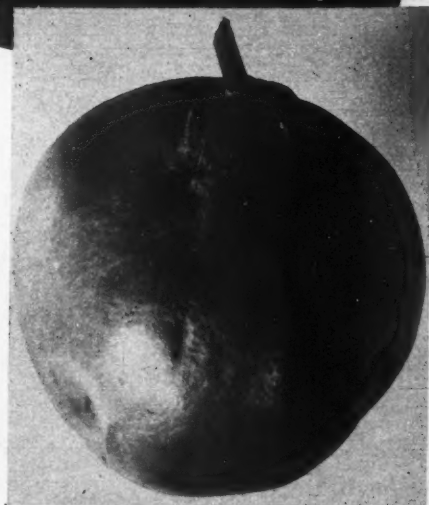
By U. P. HEDRICK

QUINCES were as commonly grown as apples and pears in early England, and even in the days of some of us now living in America there were quince orchards wherever apples and pears were grown. Many householders on farms or in villages had one or two quince trees for fruit as well as for ornamentation on their lawns, for few trees are more beautiful than a well-grown quince when the end of every branchlet is laden with a single white or pinkish flower two inches in diameter.

The origin of the quince seems to have been Persia and Turkestan where it was known as the golden apple of the Hesperides. It came to western countries, of course, by the way of Greece and Rome and early became a favorite fruit in Italy, Spain, and France under the name, in various spellings, of marmalade, the confection now so well-liked when made from various sour or bitter fruits. The quince was called marmalade even in England for many centuries. From about 1629, it became a common orchard fruit in England and in the colonies across the Atlantic.

The quince is, at its full growth,

Champion Quince in bloom.



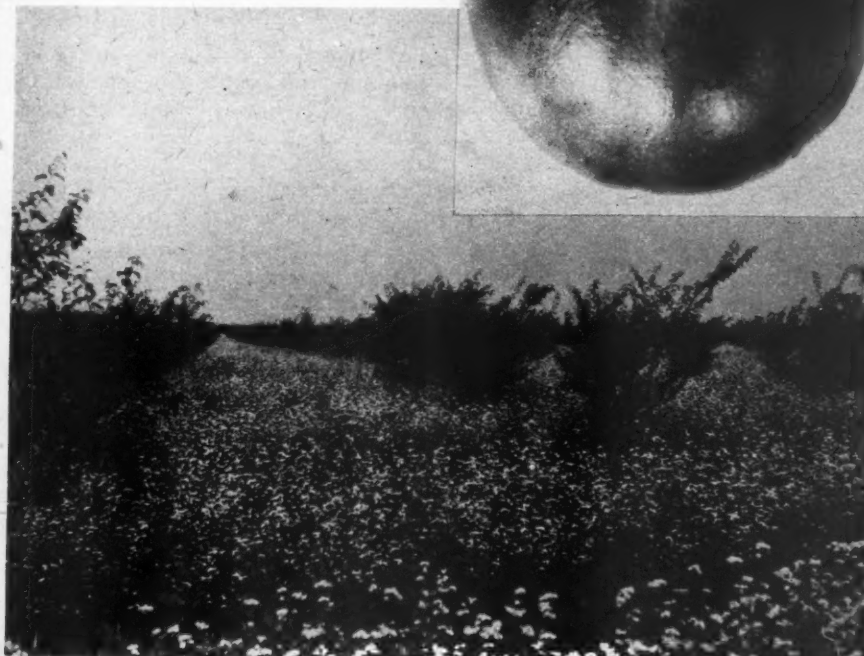
The Orange Quince.

Left—Champion Quince.

a small, crooked-branched, slow growing, shallow-rooted tree, or a much-branched shrub. The tree is the preferred form, but the species is very susceptible to fire blight. To avoid this, the shrub form may be best to plant since the parts with blight may be cut out and the others saved.

The quince thrives in any soil and climate where apples and pears grow well. In North America it grows best on the Pacific Coast where fire blight is not so rampant and the climate, north of San Francisco, suits it especially well. From central California to British Columbia quince growers gather crops of large beautiful fruit each year. In this favored region quinces sometimes attain a weight of one pound and, not so many years ago, were to be found in all

(Continued on page 19)



A 20-acre planting of Quince on a farm in Sodus, Michigan. Trees are 6-year-olds. There is a cover crop of buckwheat in the orchard.

AUGUST, 1948



NATIONWIDE FRUITS

APPLES

● **Antibiotics**, which have proved so revolutionary in the field of medicine (i.e. penicillin), have opened up a new field of research in fruit growing. Work carried on at the University of Wisconsin by Drs. Curt Leben and G. W. Keitt shows that an unidentified antibiotic substance can be successfully used as a protectant fungicide in greenhouse tests with the apple scab disease.

As reported in "Phytopathology" preparation of the antibiotic caused no plant injury and resisted washing with artificial rain. Drs. Leben and Keitt consider their work purely exploratory and feel the chief significance lies in the fact that antibiotics offer possibilities for adaptation to practical use.

In the meantime at the Arizona Station, the experts have produced cures of crown gall by the use of this antibiotic, on a saturated cotton-wool pad, applied directly to the galls. Other treatments consisted of immersing the galled roots in the solution, and also giving them hypodermic injections. Treatment has been successful with the crown galls being entirely cured on Green Gage plum, Satsuma plum, Bartlett pear, Duke cherry, and other plants.

● **One of the** latest problems confronting experts at the Geneva Experiment Station is what makes fruit trees bloom. Since this seems to be the crux of fruit production, they are trying to arrive at an answer as quickly as possible by trying several different methods.

In the past they have found that buds seem to develop where there is a large reserve supply of food in the branches. On the basis of this knowledge, fruit growers ring trees in the early summer by taking off a narrow band of bark around the stem. This cuts off the downward food supply forcing it to accumulate in the branches. As a result of this, flower buds form.

But the fruit tree specialists believe there is more to the problem than this, so they are experimenting with plant hormones, climatic conditions, and various root stocks. The hormones appear in such minute quantities that they can be determined only by different methods of observation which take a long time; ordinary chemical studies will not do the job in this case.

● **The United States** is not only a melting pot for the peoples of the European and Asiatic countries, but it is also a melting pot for fruit varieties. Since this country was first settled, exchanges of fruit varieties have been effected between the United States and, at various times, such countries as England, France, Poland, Denmark, Belgium, Norway, Germany, New Zealand, Australia, Russia, and a few of the South American countries, according to Prof. Richard Wellington of the Geneva Experiment Station. Such an exchange improves fruit breeding by skimming the world's best fruit varieties.

The Division of Plant Exploration and Introduction of the USDA directs this work and has been experimenting recently with English cherries, French hybrid grapes and certain Swiss cherries.

FIGS

● **Figs**, when frozen at 0° F., will retain their color and flavor for six months if .05 percent ascorbic acid and .10 percent citric acid are added to the sugar syrup. The Georgia Experiment Station has been conducting experiments with frozen figs for two years and has found the combination of acids to be the most effective in every respect.

Figs will have a firmer texture when they are defrosted and will better withstand the low temperature if they are frozen after they have begun to shrivel.

GRAPES

● **Cover crops** planted before harvest are more successful than those planted after harvest, contrary to the opinion of many growers. According to John Snyder of Washington State College the crop will get a better start if planted in August rather than late September and will be better able to withstand a hard winter. During harvesting the crop will not be seriously damaged by "tramping" if the seed is thickly sown.

Three types of cover crops widely used in Washington with success are vetch, Austrian winter peas, and rye, which is successful only if nitrogen is also present.

PEACHES

● **After a peach** has reached the proper size, and has colored red, there is but a short time to full ripeness. A tinge of yellow on the side opposite the stem is the warning sign for approaching ripeness. This tinge may appear while the rest of the fruit is still hard ripe.

When picking peaches for local consumption, the proper time to pick is when the yellow color appears over all the fruit, and a slight softening occurs at the end opposite the stem. Picking at this time will provide fruit of the best size, quality and flavor.

For more distant markets, or for storage, pick the peaches just as the yellow tinge appears at the end opposite the stem, before the fruit has softened. This will be after the peach has reached the full size, and has a good, red color. For home use, fruit can become full ripe on the tree.

Use of a pressure tester in conjunction with the color and softening guides is recommended. The pressure tester measures the firmness of the flesh, and is a good check on ripeness.

Of course, great care must be exercised in picking peaches, as bruised fruit deteriorates rapidly, and is soon unfit for the best markets.

AMERICAN FRUIT GROWER

MARKETING

NATIONAL INCOME

● What can farmers do to guard against depressions? Keep well-informed about the national outlook for business activity, says the University of California. Bellwether of business activity is national income, economists agree, but last year a high national income did not mean a high income for fruit growers. Reason? Suggested by USDA's Don Rubel is the fact that last year consumers spent the smallest percentage of their food dollar for fruits and vegetables since 1913. Of the 1947 national income of \$203 billion, \$36 billion went for food of which only \$6.5 billion was for fruits and vegetables. Fruit growers looking ahead to future prices would do well to keep an eye on the competitive relationship between fruits and other foods as well as fluctuations in national income.

FRUIT IMPORTS

● Bananas are being imported at their pre-war rate of 60 million bunches and, backed by substantial advertising programs, make real competition for other fruits. In addition, plans are being made for new banana plantings. The Dominican Fruit and Steamship Company will pay small land owners in the Dominican Republic 60 cents a bunch for bananas and expects to handle five million bunches yearly. At the same time, in the northeast section of the Dominican Republic, United Fruit Company is spending \$18 million over a 9-year period to develop land featuring overhead irrigation, and a new harbor has already been built where fruit will be picked up for American markets.

ADVERTISING

● The power of advertising is told again by the Great Lakes Apple Juice producers, an organization of apple juice packers in Michigan. Faced with a large carry-over of apple juice last fall, the packers banded together and agreed to contribute 5 cents a case towards an advertising campaign. With a budget of \$12,000 and Sale Counselors, Inc., of Detroit as advertising agency, the organization sent news releases to food editors, advertised over the radio and in newspapers, and sponsored a recipe contest. Twenty-two weeks of weekly advertising in Milwaukee, Chicago, Lansing, Grand Rapids, and Detroit, using the slogan, "Get a pectin pick-up," has shown results in sizable sales.

● Washington's estimated apple crop of 28,652,000 bushels (five million less than last season) will raise over \$600,000 at the new apple tax rate of 2½ cents a box, 1 cent over last season. Last season, Washington growers spent over \$900,000 in promotional campaigns.

● Florida Citrus Commission, which receives more than \$1,250,000 annually from growers for advertising and publicizing Florida citrus fruits, has allocated \$75,000 for medical advertising alone and, in addition, has approved the expenditure of \$100,000 for research.

● In its annual report, Appalachian Apple Service, composed of growers in the four-state area of Pennsylvania, Virginia, West Virginia, and Maryland, reports \$12,000 spent for advertising and publicity. Three of the states, Maryland, Virginia, and West Virginia, finance their own promotional work through self-taxation by state apple tax laws.

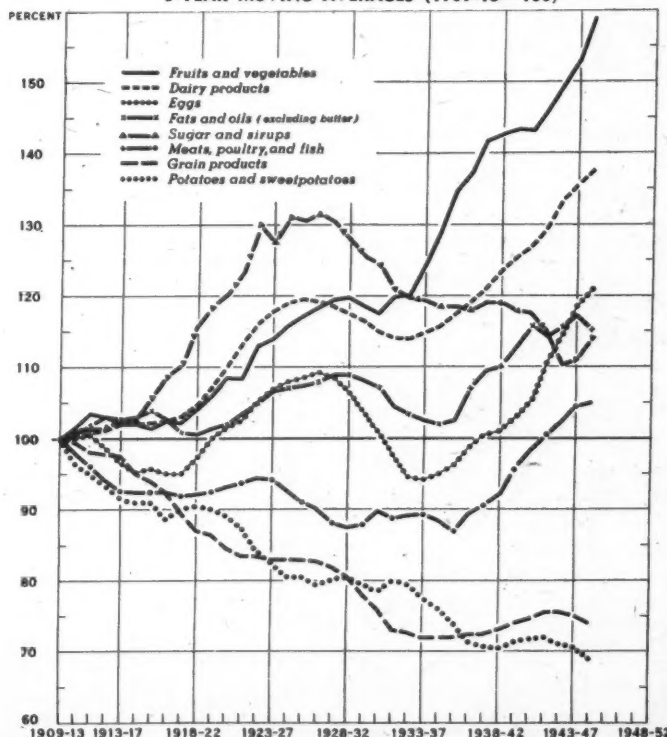
PRICES

● Future United States farm prices for apples might be expected to range from 85 cents to \$1.15, says a Washington State College bulletin, if we have conditions of moderate employment and if the three major winter fruits, apples, oranges, and grapefruit, maintain the same price-supply relationship which prevailed immediately preceding the war. In the meantime, the House Committee on Agriculture received a special report from the USDA's Bureau of Agricultural Economics forecasting a favorable period for farmers during the next 25 years.

CO-OPERATIVES

● Long plagued by keen competition among 350 odd packing houses and large grove owners who sell independently of each other, Florida citrus marketing faces a brighter future if plans of L. H. Maxcy of Frostproof are carried through. Maxcy believes the formation of a state-wide co-operative association with power to regulate sales of fruit would stabilize prices and enable the industry to pull together. To be known as the "Florida Citrus Mutual" it is hoped the co-operative will ultimately regulate sales
(Continued on page 19)

TRENDS IN PER CAPITA CONSUMPTION OF FOODS BY GROUPS
5-YEAR MOVING AVERAGES (1909-13=100)



The chart above was compiled by the U. S. Department of Agriculture to help economists predict future food demands. Fruits and vegetables have shown the greatest increase in consumption with potatoes and sweet potatoes showing a definite downward trend. Over the same period, apples have shown a downward trend, citrus has shown a marked increase, and peaches have shown a fairly level per-capita consumption rate. USDA economists expect current trends to continue; that is, consumption of fruits and vegetables and dairy products is likely to continue to increase but at a slower rate, consumption of grain products and potatoes is likely to remain at about the current level, while consumption of meats is expected to continue high if incomes and employment remain relatively high.



• Price Support—Yes or No?
• Great Bay Strawberry for N. H.

NEW JERSEY, July 24—A debate on the advisability of extending the government support price program to include fruits and vegetables was the feature of the annual summer meeting of the New Jersey State Hort. Soc. The case for support prices was presented by W. B. Duryee, Allentown peach and strawberry grower and former state secretary of agriculture, who argued that government supports provide the only mechanism by which the income of the farmer can be maintained in proper balance with that of the rest of the nation. Speaking on the opposite side was Karl King, King Farms, Morrisville, Pa., who contended that government aid was to blame for over-production and that American farmers cannot afford to permit the government to control their agriculture. He predicted that continuation of support prices would antagonize consumers and eventually bankrupt the nation.

About 400 growers were present to see the demonstration of machinery, particularly new sprayers, dusters, cultivators, and the brush shredder which is owned jointly by a group of New Jersey growers.

IOWA, July 15—Morris Mortimore of Lamoni grows his raspberries—Cumberland, Latham, and Sodus—in soil which is grundy silt loam on a three percent south slope. The entire surface of the ground is covered with mulch throughout the year.

Two sprays are applied in the spring when the leaves are three-eighths of an inch long, and when the shoots are 8 to 10 inches long. Lime sulfur is used for the first spray and Bordeaux for the second. Simple trellises are used for all varieties. Each cane is tied to the trellis separately.

Probably a condition which offers a potential threat to many orchards in this state is that of grasshopper damage. Driving through Montgomery county in southwest Iowa on July 11, we drove through a two-mile stretch of black top in which the hoppers averaged not over one foot apart in any direction.—W. H. Collins, Sec'y-Treas., Iowa Fruit Growers' Assoc., Des Moines.

MAINE, July 23—The Maine Blueberry Growers, Inc., which was consolidated from four main blueberry growers and freezing co-operatives has been newly formed with Ivan M. Scott of Waldoboro as president, and Raymon N. Atherton of Orono as general manager.

The purposes of the consolidation are to improve handling and packing methods, and to be more economical by the distribution of larger volumes and better use of facilities.

Business is on a non-profit basis and the net proceeds from sale of products will be returned to the blueberry growers on a patronage basis.—Rockwood N. Berry, Sec'y, Maine State Pomo. Soc., Livermore Falls.

MARYLAND, July 23—The berry crop was considerably reduced this year by anthracnose disease and unusually bad winter conditions. One of the most experienced growers in the state commented that this was the worst crop in his knowledge, as far as producing the crop was concerned and the final yield and quality obtained.

The tree fruit fellows have their joys in prospect of demand for fruit as shown by the early apple and peach market, but they are a little worried by two rather persistent pests. The peach growers are watching brown rot disease as this has been a favorable season for infection. Concentrated liquid lime sulfur, as indicated by Indiana tests, has been used, following the suggestions of the pathologists, and results are good. The apple growers have used some high-powered materials for red mite control.

But even more worrisome is the leaf roller which has three broods, and that last brood may come just in time to enter the apples close to harvest time with control methods none too promising. Leaf roller is a major pest in the orchards this season while codling moth has almost dropped out of the picture, for this year at least.—A. F. Vierheller, Sec'y, Md. State Hort. Soc., College Park.

MASSACHUSETTS, July 23—Nearly 100 small growers attended the small fruits program at the University of Massachusetts during the annual Farm and Home Days. Featured on the program was a talk by Prof. George L. Slate of the N. Y. Agr. Exp. Station on "New Developments in Strawberries and Raspberries." In the afternoon growers toured the experimental plantings where they saw chemical weed control plots in strawberry, raspberry, and blueberry varieties.

The following day 250 tree fruit growers spent the morning watching demonstrations on orchard efficiency equipment such as power pruners, chain saws, and mowers. The highlight of the morning's program was a demonstration of orchard spraying by helicopter. The afternoon program had an inspiring talk on "Efficiency in Orchard Operations" by Kenneth L. Robinson of Harvard University.

IAA CONVENTION

The International Apple Association will hold its annual convention August 9-12 at Hotel Pennsylvania, New York. The business sessions will include forums on many phases of marketing, including transportation, retailer requirements, and views of wholesalers, brokers, shippers, and producers. Entertainment has been planned for the evenings and special plans have been made for the ladies.

Following the talk the growers went on a tour of the University orchards where they saw spraying experiments, chemical thinning plots, and rootstock experiments.—W. D. Weeks, Univ. of Mass., Amherst.

NEW HAMPSHIRE, July 19—The New Hampshire Horticultural Society will hold its annual fruit growers tour August 17. The tour will include Farnum Bros. Orchards in Concord, Pitman Farms in New Boston, Lievens Orchards in Hollis, and Badger Farms in Wilton.

The importance of proper pollination of McIntosh in such a year as this when the temperature remained low during the blooming period was definitely demonstrated by tagging and hand-pollinating the blossoms on a few branches in McIntosh orchards where there were few or no other varieties. I carried a small bottle of pollen and played the part of the busy little bee. An excellent set of fruit was obtained on the hand-pollinated blossoms and a very light set on nearby trees.

One of the highlights of the plant breeding work at the New Hampshire State Exp. Station is the introduction of the Great Bay strawberry. The breeding work was carried on by Dr. L. P. Latimer of the Department of Horticulture. The new variety is a cross between Simcoe and Catskill. The variety, under New Hampshire conditions, is highly productive. The berries are bright red in color, attractive, and of good size and flavor. They ripen about one week later than Howard 17 and over a longer season. It looks like the new variety will have a real place on our local markets.—E. J. Rasmussen, Univ. of N. H., Durham.

NEW YORK, July 14—Peaches are showing excellent quality in New York. Trees have never been in a more vigorous condition. So far, size is well ahead of last year. Insect control has been excellent and, in general, we look forward to a superior crop of peaches.

Cherries are now being harvested with what looks like a 20 percent increase over last year. Again, size is exceptionally good.

Pears are very scattered with only a few crops next to Bosc pollinators. Apples have had a heavy drop especially in orchards appearing to be heavily set earlier. Wealthys have been consistently thinned this year with hormones and DN's and a better size crop is expected than in many years. Scab is severe in many orchards, both in western New York and in the Valley. Northern New York is in better condition.

Red-banded leaf roller has been severe in the first brood where it was present last year.—D. M. Dalrymple, Sec'y, N. Y. State Hort. Soc., Lockport.

OHIO, July 12—Frank Winter, plant pathologist, Wooster, Ohio, has one of the better black raspberry plantings in Ohio. Five acres of the six-acre plantation were set in the spring of 1946 and one in 1947.

The soil is a silt loam, sloping gently
(Continued on page 16)

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STATE NEWS

(Continued from page 14)

towards the west. The varieties grown are Cumberland, New Logan, and Bristol. Winter is more or less favorable to the Bristol. In his planting it does seem somewhat more vigorous and productive than the others. Rye has been grown as the cover crop. Winter's soil management practices are somewhat regulated by the fact that he also grows plants for sale. Recognizing and eradicating disease is the first essential in profitable berry growing.—C. W. Ellenwood, Sec'y, Ohio Hort. Soc., Wooster.

TENNESSEE, July 23—Tennessee continues to be the leading producer of strawberries in the mid-spring season. While Blakemore is the leading variety, an increasing acreage in this and adjoining states is being planted to the "Tennessee" series of varieties, particularly Tennessee Shipper (midseason) and Tennessee Beauty (late).

Leading Davidson County raspberry growers are J. Nicholas Peay and his son, Joe, who have eight acres of Latham and Cumberland near Goodlettsville. Their patch of Cumberland, producing for twenty-five years, is possibly the oldest producing planting of black raspberries in the country. It consists of narrow rows, 6 feet apart and following the contours of a steep hillside, with plants left about 3 feet apart in the row. The Peays do not practice the summer pinching-back that is usually recommended for new canes of black raspberries, but allow them to make natural growth and root at the tips. In early spring the canes are topped at 2½ to 3 feet and tied for support to two parallel wires just below this height.

The planting is partially renewed each year by removing some of the older, heavy stools, with rooted tips left for replacements. Diseased plants are rogued out as they appear. The Peays think they get less winter injury with this system than where summer pruning is practiced, and the long-continued productiveness of their planting seems to indicate that their system of management is practical in this area. Late spring dry seasons sometimes have seriously curtailed their raspberry crops, so they are now planning to impound a spring as a source of irrigation water.

Annual summer tour of the Tenn. Hort. Soc. will go from upper east Tennessee to Winchester, Va., about the end of August. Tour program will be issued by mid-August.—J. C. McDaniel, State Hort., Nashville.

VERMONT, July 23—The 1948 commercial apple crop is now estimated at one million bushels. This figure is at least 200,000 bushels over the 1947 crop. McIntosh and Northern Spy are set heavy in almost all sections of the state. Delicious are set light but are of excellent quality especially where the Fermate or Karbam spray schedules were followed.

Results obtained from the artificial application of pollen by spraying are disappointing. Little or no success was realized from this practice. Blossom-thinning sprays, mostly hormones, were used extensively on Northern Spy, Delicious, and Wealthy with varying degrees of success. Most growers noted a decided reduction in the amount of hand-thinning necessary for these varieties. Overthinning resulted in a few orchards where tree vigor or soil conditions were not good.

The percentage of cull apples caused by

scab spots or insect injury is expected to be much lower than in 1947. Extremely heavy McIntosh and Spy sets in many orchards will result in more cull fruits due to small size and low color than insect and disease injuries on these varieties.—C. L. Calahan, Ext. Hort., Burlington.

WISCONSIN, July 23—A visit to two neighboring fruit farms, the Thompson and Marken Orchards and the J. F. Swartz Nursery near Kenosha, brought out some interesting facts about strawberry varieties. Thompson and Marken have a large apple and cherry orchard but grow five acres of Premier strawberries. "Premier," says R. L. Marken, "does better than any of the varieties we have grown."

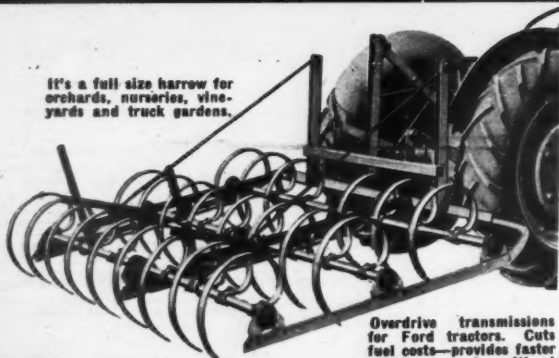
J. F. Swartz, who with his two sons operates a large nursery and has ten acres of strawberries, says that the Thomas and Robinson varieties do best on their soil. The two farms are only a short distance apart but the soil is different. This illustrates the difference in the performance of varieties under different conditions.

In cleaning up a first year strawberry bed, Mr. Swartz mows, rakes, and then cultivates between rows with a rototiller. He planned to spray with 2,4-D after that to kill weeds. He says he has no trouble in getting a patch clean by this method and it costs about one-fourth as much to rejuvenate an old bed as to raise a new one. In early November he applies a heavy straw mulch for winter protection.

The Wisconsin Centennial Exposition will be held August 7-29 in Milwaukee, and the week of August 8-14 will feature "5,000 Years of Plowing" and "March of Machines."—H. J. Rahmlow, Sec'y, Wis. State Hort. Soc., Madison.

GROWER PROVEN IMPLEMENTS ORCHARD TESTED

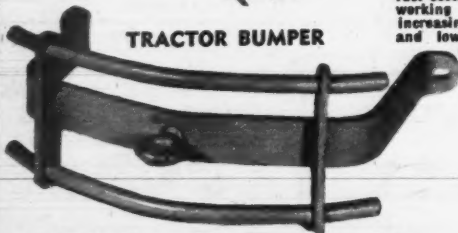
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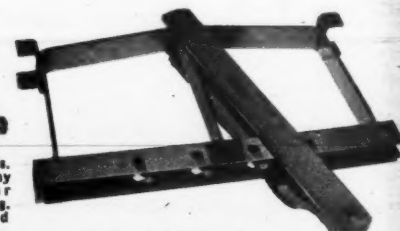
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IN THE NEWS

DR. RALPH A. VAN METER

The University of Massachusetts has chosen a prominent horticulturist as its thirteenth president. He is Dr. Ralph A. Van Meter, former dean of the School of Horticulture and acting president since the retirement of Dr. Hugh P. Baker in June, 1947.



Dr. Ralph A. Van Meter

Dr. Van Meter was born on a farm in Ohio, took his undergraduate work at Ohio State University, and his Ph. D. at Cornell University. In 1917 he became instructor in Food Conservation at the University of Massachusetts, was made Professor of Pomology in 1923, and became Dean of the School of Horticulture in 1932.

Dr. Van Meter is an active member of the Massachusetts Fruit Growers' Association (of which he was president for several years), the Massachusetts Hort. Society, and the Boston Hort. Club. At present he is on the Board of Directors of APS and for a number of years was on the Board of Managers of the same organization.

DR. P. D. PETERSON

Dr. P. D. Peterson has recently joined the staff of the Stauffer Chemical Co. as Technical Director of Agricultural Sales. He was formerly with the American Fruit Growers, Inc.

Dr. Peterson has his degrees from the University of Minnesota and has spent the last 20 years in entomological and agricultural research for the U.S. Department of Agriculture, Kopper Research Corp., and the Freeport Sulphur Co. He has made extensive analyses of weed and pest control problems and has conducted laboratory and field trials on the newer fungicides and insecticides.

DR. B. L. WADE

On September 1, Dr. B. L. Wade will become head of the Department of Horticulture at the University of Illinois. He replaces Dr. M. J. Dorsey who will retire.



Dr. B. L. Wade

Dr. Wade has been director of the U.S. Department of Agriculture Breeding Laboratory in Charleston, South Carolina, since 1936 and before that was a vocational agriculture teacher.

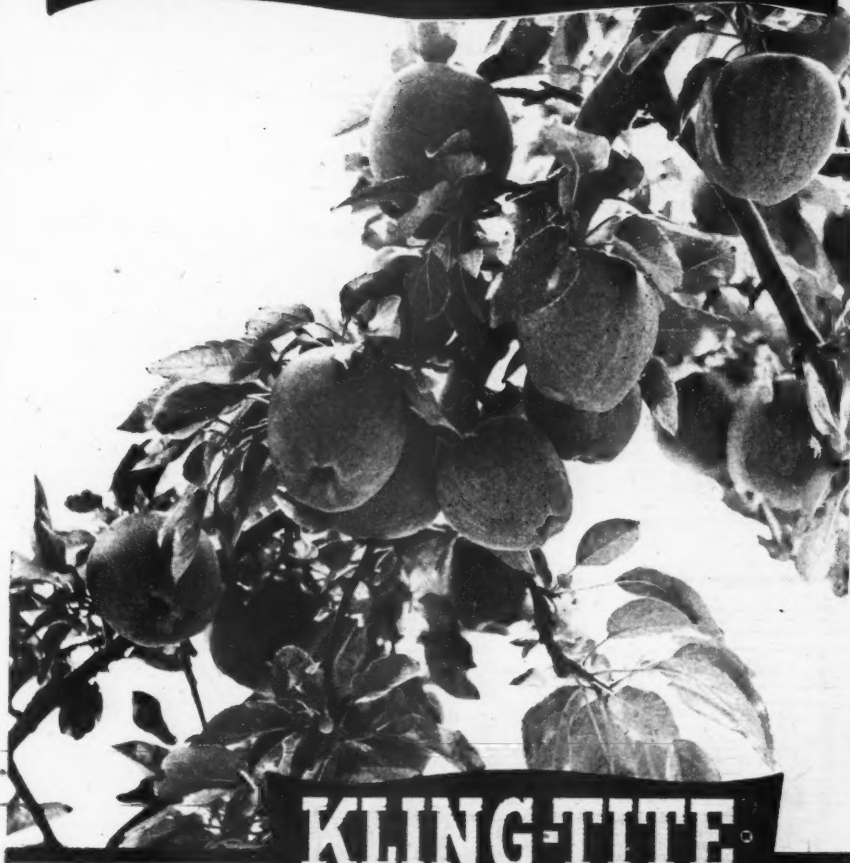
He has his B.S. and M.S. from West Virginia University, and his Ph. D. from Wisconsin University. Dr. Wade has been active in numerous horticultural organizations and has written many publications on horticultural subjects.

ALBERT A. LAPLANTE, JR.

New extension entomologist at Pennsylvania State College is Albert A. LaPlante, Jr. LaPlante has been an assistant in entomology at the New York State Agricultural Experiment Station in Geneva since his graduation from the University of Massachusetts in 1944, where he majored in entomology. He is a member of the American Association of Economic Entomologists and Gamma Alpha, honorary scientific graduate fraternity.

AUGUST, 1948

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You can spray with **KLING-TITE** or dust with **KLING-TITE**.



CALIFORNIA SPRAY-CHEMICAL CORPORATION

RICHMOND, CALIFORNIA
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BAUER FRUIT PICKING LADDERS Now Available

for Direct Shipment
SEND YOUR ORDER NOW

Now you can get the ladders you've been wanting if you order early. Production is limited — first come, first served, so send your order NOW. Enclose check. Shipment made f.o.b. Wooster, Ohio.



FRUIT PICKER STEP (Three Legs)

These lengths only

6' - \$7.20 10' - 15.00
8' - 9.60 12' - 18.00

FRUIT PICKER SINGLE (Closed Top)

These lengths only

12' - \$8.65 16' - 12.50
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Send
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Enclose check or money order

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MANUFACTURING
COMPANY
Wooster,
Ohio



Barker "IDEAL" FRUIT PICKERS BAGS

Makes fruit picking easier and quicker. Prevents bruising. Can pick with either hand. Load is easily carried and emptied without removing from shoulders. Made of heavy canvas, leather reinforced with strong shoulder straps.

Sold by leading
dealers or sent post-
paid at **\$2.75**
each

FREE CATALOG! Send for a free copy of our catalog showing other types of fruit pickers' bags.

BARKER MFG. CO., Honeye Falls, N. Y.



Your YOUNGSTER WILL LOVE IT!

Give your youngster the joy-ride of a lifetime! **TRACTALL** looks just like a man-size tractor. It's the perfect gift for boys, girls, up to 12 years old. Pedal-driven. Sold direct from factory. Write for literature and **FREE** trial offer.

INLAND MFG. CORP., Dept. AF-3 164 Elliott St., Buffalo 3, N. Y.

**HUNT'S GRAFTING WAXES,
RODENT REPELLENT, ETC.**
MICHIGAN BEE & FARM SUPPLY
BOX 7, LANSING 1, MICH.

PEACH IRRIGATION

(Continued from page 9)

tree size and bearing surface increase, the amount of soil nutrients needed is also increased and must be supplied.

The actual operating cost of delivering 30,000 gallons of water per hour to the orchard is \$1.20 for gasoline and \$1.20 for the labor of two men to move the pipe. The irrigation system cost approximately \$100 per acre, including installation. Interest and depreciation costs are about \$7.50 per acre per year.

Mr. White finds it more economical and therefore more profitable to grow more than one variety of peaches. This enables him to utilize both his irrigation system and labor to better advantage. During the current season, sufficient rain occurred to develop satisfactory size in the Fair Beauty crop, but it was necessary to irrigate his Elbertas in late June. The Dixigem and Goldeneast crops were killed by the March freeze.

Earl R. Taylor of Greer irrigated 25 acres of Redhaven and 30 acres of Goldeneast peaches during the present season. His outfit supplies 800 gallons per minute, and he moves the irrigation lines every 75 minutes. Mr. Taylor says that the increase in size and color of his fruit and the excellent amount of vegetative growth obtained this year on the 25 acres of Redhaven have paid for his equipment in one season. He irrigated his Redhaven block three times and in addition thinned the fruit but not as severely as he has been accustomed to doing. In this manner he produced peaches $2\frac{1}{4}$ inches and up, which is excellent size for the Redhaven variety.

The 30-acre block of Goldeneast was irrigated five times, with part of the block being thinned and part not thinned. In the part not thinned he had to have the branches propped, and at this writing he only picked six cars of fruit and is getting practically all of his fruit above 2 inches in diameter, with a large percentage $2\frac{1}{4}$ inches and up. In addition, his trees have already produced plenty of vegetative growth for a large crop in 1949. To make further use of his irrigation equipment, he has planted ten acres of fall tomatoes from which he expects to obtain a full crop of marketable fruit.

Watson Brothers of Ridge Springs have an extensive irrigation system, and they pump their water nearly two miles to the orchards. They are using black iron pipe for the main line and galvanized portable pipe with risers for irrigation. However, they are planning on irrigating a number of other

crops, including pasture, corn, and strawberries in addition to peaches.

B. M. Gramling and Henry Gramling of Gramling; E. M. Hawkins, Inman; Arthur Rainey, Campobello; J. Gordon Floyd, Spartanburg, and the Reverend J. W. Sprinkle of Cowpens are some of the growers who have purchased irrigation equipment for the present season, mainly for the purpose of irrigating peaches but also for irrigating other crops. In talking with the growers who have had some experience with irrigating peaches, I found that each one thinks that irrigation is the best insurance they know of for the production of a good quality crop, insofar as climatic conditions are concerned.

The Agricultural Engineering and Horticultural Departments of the South Carolina Experiment Station, in co-operation with soil scientists of

HANDY ANDY



A metal drum, a four-cylinder airplane-type engine, and a spray tank—that is what it takes to make a homemade air-blast sprayer, according to William E. Boyce of Albion, New York. The sprayer has 40 nozzles and a 35-gallon-per-minute pump. The drum can be turned in any direction with a steering mechanism, and two men are required for the spraying operation.

the Soil Conservation Service, have begun experiments this season in several peach orchards in Spartanburg County. Areas were chosen from two typical orchards ten miles apart and on two soil types. Lightweight, portable pipe with low-angle revolving sprinklers is used in these experiments.

South Carolina is very fortunate in having an adequate supply of water in the many streams which amazingly parallel each other from the mountains to the sea. In addition, many watersheds fed by springs are potential reservoirs for a large number of growers in the Piedmont area, whereas wells may be used as a source of water in the coastal plains area. More and more fruit growers, as well as other farmers, are taking advantage of our abundant water supplies to eliminate one of the biggest gambles in agriculture.

AMERICAN FRUIT GROWER

MARKETING

(Continued from page 13)

of 75 per cent of Florida's citrus production.

A similar movement exists in Texas to unite growers in one marketing organization, in this case, the Texsun Citrus Exchange.

PROCESSORS

● Once again the government stepped in to stabilize the apple market by purchasing 723,000 cases of sauce and 40,000 cases of slices. The 1947 pack of apple slices was a little over two million cases and of apple sauce approximately six million cases. The government purchases will substantially reduce the carry-over and ease the pressure on the coming crop.

APS

(Continued from page 11)

fruit markets at very low prices. Now, however, as in the East, they are little grown in commercial orchards.

There is still considerable demand for quinces by makers of commercial jellies, but a few fruits go a long way. The basis of most jellies made for wholesale is fresh apple juice flavored with quince. Apple butter is often flavored with quince, too. Many housewives flavor their jellies and apple butter and, more particularly, apple sauce with a little quince.

Varieties of Quinces

There never have been many varieties of quinces—possibly, all told, less than one hundred. The reason for the scarcity of varieties is that quinces are propagated from cuttings, while all other tree fruits have been largely grown from seeds, and their seedlings, passed through the sieve of selection, have given many varieties. Perhaps one might find six or eight varieties in the fruit catalogues of North America.

Champion is a standard variety. The fruits are large and handsome with flesh almost as tender as that of an apple, delicate in taste and odor which are imparted to any other fruit with which the quinces are cooked. The trees are large, vigorous, bear young, and are productive. The fruit ripens late and keeps long.

Fuller is the best early quince. It is characterized by beautiful, rich golden-yellow fruits. Unfortunately, the trees are a little more subject to blight than other varieties and, since early quinces are not much in demand, are now seldom found in commercial plantations.

Meech is a strain of the better-known Champion. It ripens its crop two weeks earlier, is much less susceptible to blight, and the trees are hardier, more vigorous, and more pro-

(Continued on page 27)



You know what you're doing

when you spray the old, reliable

REG. U. S. PAT. OFF.

FRUITONE

FOR PRE-HARVEST DROP

Fruitone was the first hormone spray to be put on the market. It has 8 years of successful use behind it. It is an accepted, dependable product that gives the results you're looking for.

LIQUID OR POWDER

Fruitone can be obtained in liquid or powder form . . . whichever you and your State Experiment Station prefer.

ORDER NOW. The average tree must be sprayed at least ten days before picking time. Order your supply now from your dealer, or write to us direct.

American Chemical Paint Company
Agricultural Chemicals Division
Ambler, Pa.

Send for your Maturity Schedule, telling you the best time to spray for every variety of apple and pear.

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Henry Gram-
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GROWER

AUGUST, 1948

GROFF NORMAN MFG. CO.
EDMOND. OKLA.



♦ TUALATIN VALLEY NURSERIES

CHOICE
FRUIT & NUT TREES

**FROM THIS
FAMOUS NURSERY—
SINCE 1915
NURSERY STOCK
Quick Bearing, True Name
700 VARIETIES**

Apples, Peaches, Pears, Plums, Prunes, Cherries, Apricots, Figs, Filberts, Walnuts, Almonds, Cane and Vining Berries. Blue Berries. Strawberries.

**ALSO—SHRUBS, FLOWERING SHADE TREES
VINES, ROSES, BULBS, ORNAMENTALS**

SEND FOR

BIG FREE NURSERY CATALOG

• TUALATIN VALLEY NURSERIES
SHERWOOD, OREGON P. O. BOX 31



**APPLE BOXES and FIELD CRATES
BOX SHOOKS, WIRE BOUND BOXES**

**MARINETTE & MENOMINEE
BOX COMPANY**
Marinette, Wis.

OFF-GRADE APPLES

(Continued from page 7)

350,000 cases of juice annually. In terms of gallons this approximates more than a million, and in terms of apples used it means about 265,000 bushels—apples which might otherwise have gone to waste for lack of a market.

The 1947-48 season was the first in operation, but its product, Red Cheek Apple Juice—the same brand as that of its sister co-operative at Fleetwood, Pa.—has had wide acclaim. "It's the best apple juice I have ever tasted," say those who have tried the Red Cheek juice. It really has a delightful and distinctive apple flavor, making it one of the finest fruit drinks available.

Cleanliness during the process counts heavily towards this result. All equipment is cleaned thoroughly every night after working hours. That was one reason why a plentiful supply of water had to be available, for it takes about 50,000 gallons daily to clean and operate the plant. Press cloths are cleaned in an automatic laundering machine at the end of each day's run. Cleanliness keeps bad flavors from developing in the canned juice.

Operation of the plant is skillfully supervised by its manager, Raymond L. Shenk, a veteran processor. Before starting the new Chambersburg plant, Manager Shenk spent several weeks at the Berks-Lehigh plant at Fleetwood studying their methods of juice manufacture.

Blending of proper varieties is a major means of securing good flavor in apple juice. This is done with great care at the Chambersburg plant and is one reason for the product's fine flavor. The exact blend of varieties is not available for publication, but Stayman and York Imperial are among the leading varieties used. Stayman, alone, imparts considerable flavor to juices.

This is how the Chambersburg plant operates. Growers bring their apples to the plant by the truckloads where they are weighed and dumped onto conveyors which carry them into the big bins on the ground floor. Inside, a long conveyor belt runs along in front of the bins. Each bin is equipped with a door which can be easily lifted, letting apples roll out onto the belt which carries them to the grading machine. Since each bin holds a different variety, a given quantity of each can be let out and sent to the presses to give the proper blend.

At the grading table, three or four workers carefully look over the fruit and pick out those which show decay,

leaving only the best for processing. These go to the third floor where they are ground to pulp in a hammer mill. The resulting pomace, dripping with rich-flavored juice, falls down shutles into the two large hydraulic presses on the second floor. Each press squeezes about 340 gallons from 85 bushels of apples at a time. Twenty-five presses can be run in an eight-hour day or, in other words, some 8500 gallons of juice are pressed out. The press room is separated from the processing room.

The juice is pumped from the press retainers into a large stainless steel tank in the processing room on the same floor. Before entering this holding tank, the juice passes through a revolving screen which removes all large particles. From the holding tank it goes through a centrifuge which removes all small particles. This method replaces the older filtering methods. A very light amber liquid is the result.

Next, the juice is pasteurized at 180° F. and is on its way to the filling machine when it is fortified with ascorbic acid (vitamin C) at the rate of 180 milligrams per quart of juice.

Before going into the can or bottle, each batch of juice is sampled and analyzed in the laboratory of the plant for total solids, sugar, and vitamin C content. This is to insure that the juice measures up to high standards before being put on the market.

One line of filling machines can be adjusted for filling 6-ounce and 46-ounce tins, the other for quart bottles and gallon jugs. About 20 gallon jugs are filled per minute, 80 46-ounce tins, or 250 of the 6-ounce cans, are filled in the same period of time. From the capping machines the cans, or glass containers, pass slowly through a spray of cold water to reduce the temperature of the juice promptly to 100° F. or less. This is important, for if the juice is not cooled quickly it tends to lose its rich apple flavor. After cooling, the canned or bottled juice is cased and stored in the large rooms until shipment.

The juice is finding ready sale all along the Atlantic seaboard wherever it has been sold thus far. The entire output is sold through a sales promoter in New York City.

One may wonder why 6-ounce cans are being packed. This container has been popular with many retailers, especially those who serve it by the glass as in drug stores and confectionaries. A new feature now being explored with this container is its sale through a vending machine for

(Continued on page 23)

AMERICAN FRUIT GROWER

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GROWER

A NEW EARLY PEACH



A NEW yellow-fleshed, freestone peach has been discovered which matures more than a week earlier than Redhaven, heretofore the earliest of all yellow freestones. The new variety, which is a limb bud sport of Burbank July Elberta, is called Starking Delicious, and has been developed by the Stark Bros. Nurseries of Louisiana, Mo. It produces large size fruit of bright red and gold color and is found to be excellent for freezing and home canning. It is also a good shipping

peach because it attains its full color while still hard ripe and it will soften slowly during transit.

The new Starking Delicious peach is a young bearing variety, trees having borne as much as a peck of fruit in their second season. The variety was discovered in 1944 by H. Frank Smith in his Burbank July Elberta orchards in Polk County, Ark.

Stark Bros. announce that they will have a limited supply available to growers this fall.

LARGER NITROGEN SUPPLY IS FORECAST

ALTHOUGH THE WORLD demand for nitrogen fertilizer is still greater than the supply, it is expected there will be a 10 percent increase in the supply to farmers in the U. S., for the fiscal year which began July 1. The total tonnage available in all forms is forecast at 902,000 short tons as compared with 817,000 tons last year. This announcement came from the U. S. Department of Agriculture following action of the International Emergency Food Committee in allocating nitrogenous fertilizer to various countries of

the world.

The increased supply here comes as the result of three developments: first, there will be an expected increase in domestic production and imports; secondly, Congressional action has provided that 10 percent of the anhydrous ammonia produced by the Army will be turned over to commercial plants for conversion to fertilizer; and third is that 50 percent of the 1948-49 U. S. export program for nitrogen fertilizer will be made up of Army production.

AUGUST, 1948

"Wenatchee" PATENTED FRUIT PICKING BAGS



WE'RE HOLDING THE BAG...

that conforms with the requirements of the WASHINGTON STATE APPLE COMMISSION!

PREVENT BRUISES and STEM PUNCTURES!

The Wenatchee Fruit Picking Bag has an endless steel frame to keep bag open for easy access. For tender fruits it adjusts to half-bushel capacity and opens to full bushel size as needed. Empties from the bottom with "E-Z OFF" snap. Fits body comfortably, has wide adjustable web suspenders and is reinforced with leather at points of wear.

Write for Prices

SCHEFFER & ROSSUM CO.

Manufacturers • Since 1879 • St. Paul 1, Minn.

"Wenatchee" PATENTED FRUIT PICKING BAGS

GREATER PROFITS FOR APPLE GROWERS



TRESCOTT

Market Maker

No. 40 and No. 50

APPLE GRADERS

Added speed in sizing, grading and cleaning of apples cuts handling costs, prepares fruit to bring premium prices. Ruggedly built for years of trouble-free operation. Capacity of No. 40 is 30 to 40 bushels per hour, No. 50 is 60 to 70.

Write for literature

Peach and Potato Brushes, Graders
TRESCOTT COMPANY, INC.
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KILL Poison IVY

Stalks, Roots, Split rocks, disinfect with PORTABLE WEED TORCH. Fast, Sure, Economical. WRITE for FREE folder TODAY. SEE TORCHES AT Goodhartown, Pa.

Dependable **CHAMPION**

America's Favorite Spark Plug



The American farmer subjects spark plugs to sustained and severe service in all kinds of engines—car, truck, tractor and other power-driven farm equipment. As a result, he is a qualified spark plug expert. Dependable Champion—America's Favorite Spark Plug—is the overwhelming favorite of farmers everywhere. Champion Spark Plug Company, Toledo 1, Ohio.

FOLLOW THE EXPERTS

DEMAND NEW DEPENDABLE CHAMPIONS FOR EVERY FARM ENGINE

Listen to the CHAMPION ROLL CALL . . . Harry Wismer's fast sportscast every Friday night, over the ABC network

NUT GROWERS NEWS

39th Annual Convention

AN INTERESTING program is in store for those who attend the 39th Annual Convention of the Northern Nut Growers' Association at Norris, Tennessee, September 13-15, 1948.

One session is being devoted entirely to chestnut growing. This important subject will be thoroughly covered by leading federal and state investigators as well as by private growers. Those who have chestnut orchards and those interested in planting Chinese chestnuts will find this session very informative.

Papers on black walnut embryo development and nut filling will be of interest to all nut growers. Other papers by members and guest speakers on varied nut subjects will be equally interesting.

Commercial shelling of black walnuts will be discussed by important members of the trade. Recent rapid expansion of this industry has been made possible by the development of an efficient mechanical nut cracker and kernel separator. A highlight of the program will be a demonstration of this ingenious machine by its inventor.

The meeting will be climaxed by a tour of the nut plantings and experimental nursery of the Tennessee Valley Authority, affording an opportunity for those present to examine methods of nut propagation and nut culture under southern conditions.—J. C. McDaniel, Sec'y, Northern Nut Growers Assn., Inc., c/o Tenn. Dept. of Agr., Nashville 3, Tenn.

"BACKYARD" PECANS

(Continued from page 10)

growing side by side. The ability of trees to produce regularly is bound to play a big part in the final selection.

The contest is already making growers and crackers more aware of the vast difference in native pecans. As a rule, buyers have bought nuts on a "field run" basis, figuring they would yield approximately 35 percent kernels. In the 1946 contest, six of the 60 entries ran more than 50 percent kernels and only nine under 40 percent. In 1947, 32 out of the 200 samples entered ran over 50 percent kernels, and only 19 under 40 percent. This in itself is an indication of the goal toward which the program is aimed and the results thus far indicate substantial progress in the right direction.

AMERICAN FRUIT GROWER

GROWERS NEWS

Convention

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PECANS

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GROWER

TOP MANAGEMENT CHANGES AT FMC

DIVISIONS OF Food Machinery Corp. in Michigan, Florida, and California have been affected by several changes in top management. New manager of the John Bean Division in Lansing, Michigan, is Hubert L. Byrd, who was formerly manager of the Florida Division. Taking his place in Florida will be H. L. Shannon, assistant manager of the Bean-Cutler Division in San Jose, California.



Coleman Buford

Coleman Buford, former assistant sales manager in the agricultural department at Lansing, has been named general sales manager of the company. Howard G. Ingerson, a pioneer member of the company, is sales manager for the Agricultural Division.

In California, Ogden S. Sells, Food Machinery Corp. director, vice-president, executive committee member, and manager of the company's Packing Equipment Division has resigned because of ill health. His successor as manager of the Packing Equipment Division is Sidney L. Boucher, who has been assistant manager of that division for the past 10 years.



H. L. Byrd

OFF-GRADE APPLES

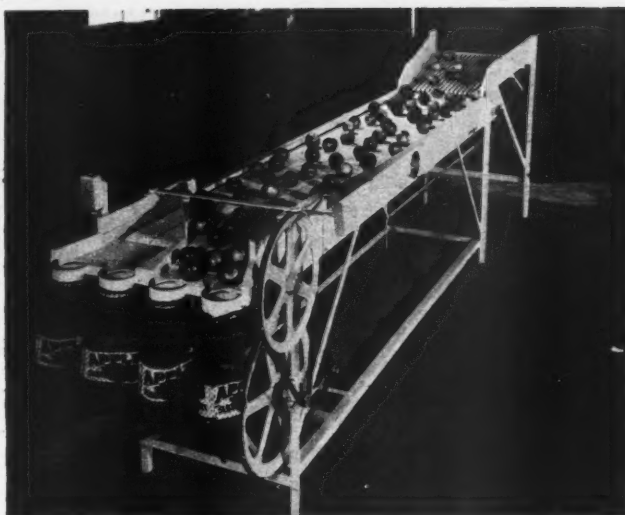
(Continued from page 20)

10 cents a can. A few tests of this method reveal it to be very promising. You simply put your dime in the slot, and out comes a can of Red Cheek apple juice.

Normally, the plant operates with about 35 employees on an eight-hour shift; however, during rush periods, two shifts are run a day, employing about 65 people. This was the case last fall when apples began pouring into the plant by the thousands of bushels. The sooner the fruit is made into juice, the better the product will be, and the more juice will be obtained from the apples.

Thus we see how one group of progressive apple growers is licking one of the industry's large problems. With this kind of ingenuity and foresight, the fruit grower has every reason to expect continued success in fruit growing.

AUGUST, 1948



From East to West, North to South, progressive fruit growers everywhere like this fine built machine, because they can see its wide usefulness.

Standard delivery chute for baskets and boxes. Bag filler for bags and cartons.

Write for more details.

PATENTS PENDING.

TAUTZ MANUFACTURING COMPANY
GANGES, MICHIGAN

CORK is BEST

FOR LOW TEMPERATURE INSULATION

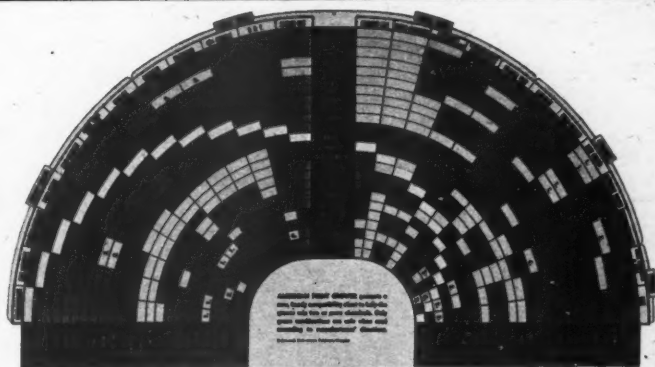
SAFEGUARD your valuable crop throughout the year. Insulate your fruit storage efficiently...with "CORINCO" CORK. Contact any one of our branches or agents in principal cities, or write direct for complete information.

CORK INSULATION CO., INC.

155 East 44th Street, New York 17, New York



**DON'T
GUESS—
KNOW**



1948 COMPATIBILITY CHART

Again this year, because of the many requests for reprints of the compatibility chart which was published in the February issue of AMERICAN FRUIT GROWER, we are printing a limited supply in colors on heavy paper stock and suitable for hanging on the wall. This revised chart includes all the new insecticides and fungicides and is an accurate guide in mixing two or more chemicals. Single copies will be furnished free to readers on receipt of 10c to cover postage and mailing. Fill out the coupon.

AMERICAN
FRUIT
GROWER
1370 Ontario St.
Cleveland 13, Ohio
Enclosed is 10c. Send
Compatibility Chart to:

Name.....

Address.....

City.....

State.....

(Offer Good only in U.S.A.)



PARA-SCALECIDE
the
Safe, Simple Dipper Method

B. G. PRATT CO.
163 RIVER ST., HACKENSACK, N. J.

Use this sure way to control PEACH BORERS

You control peach borers with far less labor and time when you use Para-Scalecide—the simple dipper method of applying paradichlorobenzene. It is safer and more effective on both young and old trees than other methods.

Simply dilute Para-Scalecide with water and pour with a dipper against the base of the tree. Then throw a few shovelfuls of earth against the base to hold the fumes.

Apply in the Fall while the ground temperature is 60° or warmer. One gallon of Para-Scalecide treats 42 full-grown trees, or 128 two-year old trees.

Be sure of safe, simple control of peach borers. Order Para-Scalecide from your dealer today. Write us for free Peach Borer circular.

There's a Pratt Spray for Every Need

D-X Spray • DDT Sprays • Sulfocide • Pratt's 622 Insect Repellent • Garden Sprays and Dust

Advertisement



From where I sit ... *by Joe Marsh*

Now It's Neckties Made of Milk!

Fellow in Andy Botkin's Tavern the other day was boasting about a trick necktie he was wearing made out of a by-product of milk. "Took 33 pounds of milk to make this tie," he says.

Bill Webster was unimpressed. "Personally," he says, "I'd rather drink the milk. Just as I wouldn't change one glass of good American beer for a necktie made from thirty barrels of it!"

Yes, modern science being what it is—seems like you can make "anything out of anything" these days. But in the case of milk, well

I guess drinking it is still a whole lot better than just wearing it.

Of course there are a whole lot of other ways of abusing goods and beverages—like a fellow who doesn't appreciate a glass of beer enough to drink it slowly and in moderation.

But from where I sit, most people who enjoy a wholesome beverage like beer or ale are moderate—because beer itself is a beverage of moderation.

Joe Marsh

Copyright, 1948, United States Brewers Foundation

Trampling Out the Vintage

By Joseph A. Cocannouer

A powerful story of farming on poor, overworked and eroded soil. The tragedy of creatures of habit and custom who refused to accept modern soil management and to their own ultimate destruction is the theme of this inspiring and interesting book. Joe Cocannouer, the author, is the Father of our present system of teaching vocational agriculture in our public schools. Many families which the author describes have their counterparts in every agricultural community. No one can read this book without becoming a better farmer and converting the bitter vintage of grapes into sound and mellow fruit.

Sent postpaid on receipt of \$2.75

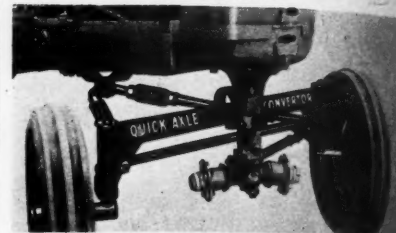
AMERICAN FRUIT GROWER

1370 Ontario Street

Cleveland 13, Ohio

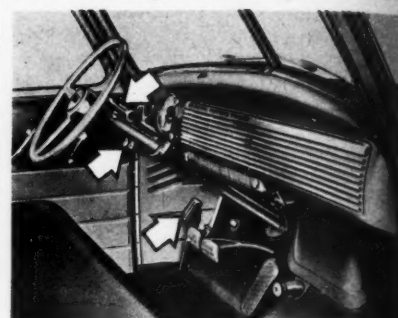
NEW

Axle Converter



Converting a row crop tractor to the conventional type is easy with the new Handee Axle Converter, and it can be adapted to any make of tractor.

GMC Light Duty Truck



The stress is on driving comfort in GMC's 1948 light duty trucks in the FC-100 and 150 series. Also featured are a new steering column gearshift and a foot-operated parking brake with hand-pull release.

Rain Bird Sprinkler



Streamlining the Rain Bird Sprinkler has assured better water distribution and maximum sprinkler life. One to nine gallons per minute is the output for a diameter up to 80 feet.

Dust Sticker

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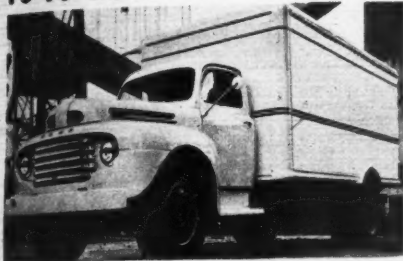
AMERICAN FRUIT GROWER

• BOX MAKER • 1948 FORD TRUCK "MARLATE"

"Marlate"

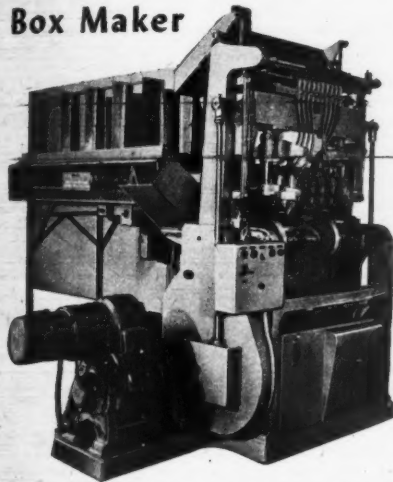
"Marlate" is DuPont's new insecticide, and it combines high efficiency, low toxicity to warm-blooded animals, and safety on plants. Used as a dust or spray, it is compatible with most commonly used fungicides and insecticides.

1948 Ford Truck



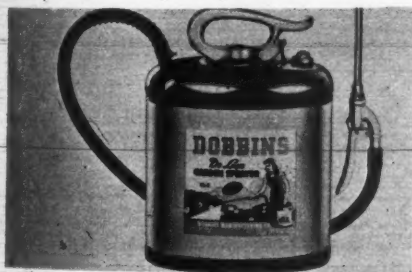
A wide range of models and capacities is offered in the new 1948 line of Ford trucks. Improvements have been made in both style and function. They are powered by three new truck engines—a 95 h.p. six-cylinder engine, a 100-h.p. V-8, and a 145-h.p. V-8,

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AUGUST, 1948

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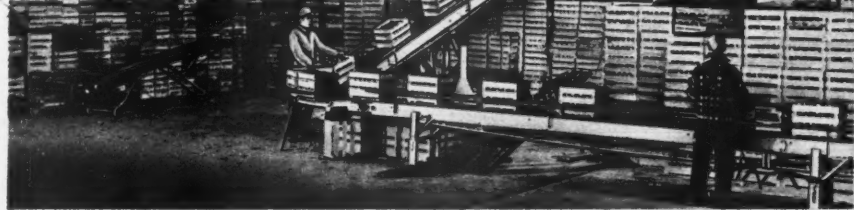
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| <input type="checkbox"/> Mother's Home Life | 1 yr. |
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An advertisement of The B. F. Goodrich Co., Akron, Ohio

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BEAUTIFUL BARRED ROCK RANTAMS. GOOD profitable side-line. FLORY, Route 1 Box 683, Ft. Worth, Texas.

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GENERAL HORTICULTURE

Principles and Practices of Orchard, Small Fruit and Garden Culture

By Thomas J. Talbert

452 pages with 129 engravings.

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1370 Ontario Street, Cleveland 13, Ohio

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NAI SURVEY REVEALS DDT INCREASES CROP

CROP REPORTS traditionally play an important role in agriculture, but accurate figures are difficult to obtain. Working on the hunch that DDT has increased the number of marketable apples, the National Apple Institute, last month, disclosed results of a survey of entomologists, horticulturists, growers, co-operative managers, and private packers.

Although some said DDT had no effect, others estimated that their crops had been increased by as much as 60 percent. Average of all queried was around a 15 percent increase. According to NAI, there was no doubt that a change had occurred and little doubt that it exerted a considerable influence on the marketing problem of the past season. The big question resulting is: In estimating the national crop at 101,000,000 bushels, did delegates to the Institute's June meeting at Harrisburg take into account a 15 percent gain? Some of the comments made in the replies, regarding the use of DDT, are quoted below:

Chas. M. Drage, horticulturist, said, "DDT has meant an increase of from 20 percent to 40 percent in the marketable supply of apples produced in Colorado. Areas formerly in apples which were pulled because it was impossible to control codling moth may be replanted."

"Orchards that would have been removed four years ago if DDT had not appeared are in many instances still producing profitably under DDT programs. Higher prices were only partly responsible for their retention. This increased life can, of course, be extended only so far, and the effects will not be so pronounced in the future as the limit is reached," according to L. F. Steiner of the USDA, who is referring to orchards in Indiana, Illinois, Kentucky, and western Tenn.

ATTENTION CANADIANS!

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RHUBARB— ATTENTION NURSERYMEN!

MacDonald and Canada Red divisions. Buy them from the largest propagators in Canada. State quantity required. Low Prices. Duty 10%. Phillips Farms, Chateaugay Village, Que., Canada.

APS

(Continued from page 19)

ductive. Meech seems to have been in cultivation in Vineland, New Jersey, since about the middle of the nineteenth century, coming into the hands of Rev. W. W. Meech.

Orange is a group rather than a varietal name. The type seems to come nearly true from seed. Orange belongs to the North, where it ripens late in the season in cool weather. In the South it ripens too early and is inferior in size, quality, and color. When or where the name was first used is not known. Orange is the leading commercial quince in the United States.

Pineapple is a variety originated by Luther Burbank and sent out by him in 1899. The originator says Pineapple is the result of an effort to secure a quince which, when cooked, would become tender as does the flesh of the apple. The flavor is suggestive of pineapple; hence the name. In appearance this quince resembles Orange but is smoother and more globular, lighter in color, and a little larger. The tree is strong grower and as productive as the Orange.

Rea is a strain of Orange characterized by very large quinces and a strong growing productive tree, with foliage a little darker than that of the true Orange. The fruit ripens a little later and keeps well after maturity. The history of Rea goes back to Cox-sackie, N.Y., whence it seems to have been disseminated by Joseph Rea.

Smyrna is a variety introduced from Smyrna in 1897 by G. C. Roeding of Fresno, California. It seems to have found a place in California but is rarely grown in the East. The plant is a handsome ornamental.

Van Deman is from Luther Burbank and has found favor in California. The tree is vigorous, hardy, prolific, and comes into bearing early. The fruit ripens just before Orange and is very large and pear-shaped with a short, obtuse neck and smooth surface.

PRUNING TOOL BUSINESS CHANGES HANDS

NEW MANUFACTURER of Tiffany pruning tools is the Buckingham Mfg. Co. which has recently purchased the business of Carroll R. Tiffany. Their new line will include Tiffany Tree Pruners or Lopping Shears, Pole Pruners, Bark Scrapers, Weeders, Brier Hooks, etc., and it will continue to bear the name of Tiffany.

Mr. Tiffany will act as consultant and technical adviser to the new owners but will continue independently to manufacture and market his hand shears and grafting tools as before.

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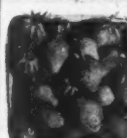
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Doubly inspected, prepaid prices, August or April

BILL BENTS NURSERIES
SMALL FRUIT SPECIALISTS
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Heavy canvas over rigid frame protects fruit. Empties quickly thru bottom. Especially for peaches and easily bruised apples. Write for folder.

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Ramblings

OF A HORTICULTURIST

Scabless Apples

BELIEVE IT or not, there are apples that do not scab!

A short time ago I stopped in to see Dr. J. R. Shay, plant pathologist at Purdue University. He showed me apple seedlings, thousands of them, whose leaves exhibited a high degree of scab resistance even after being heavily inoculated with scab spores. The scab was so severe that open-pollinated seedlings of Jonathan that had been given the same test were killed.

For the story of these scabless apples, let us go back to 1941. A young horticulturist by the name of L. F. Hough came that summer from New York to the University of Illinois. Dr. Hough was interested in fruit breeding problems, so one of his first duties was to get acquainted with the host of hybrid apples established from crosses made by the late Dr. C. S. Crandall and by Dr. M. J. Dorsey. As Dr. Hough strolled through the plantings his keen and alert eye caught sight of a peculiar condition. Two apple trees were growing side by side with branches more or less intertwined. The leaves of one were very scabby while those of the other were free from scab.

This quickened the young horticulturist's interest in an apple breeding problem which he had been turning over in his mind. Could we breed high quality varieties of apples which would be resistant to scab? Here among thousands of trees of countless kinds he saw that there are apples which do not scab, but their fruits are not valuable commercially.

About this time Dr. Shay came to Purdue from the Arkansas Experiment Station, and he, too, was interested in the problem of scab resistance in apples. So Hough and Shay and their administrators put their heads together and came up with a co-operative apple breeding program between Purdue and the University of Illinois.



The scab resistant seedlings will be tested for fruit size and quality.



Dr. J. R. Shay of Purdue inspects seedlings which are totally scab resistant.

The first job was to get together all the available species of apple (*Malus*) and find out which were scab resistant and which were not. This, in large measure has been accomplished, and they are now beset with the work of crossing these various resistant species with known apple varieties. You see, many of the scab-resistant apples are trees or shrubs producing only tiny, cherry-sized fruits—crabs, if you wish to call them that. Some resistant ones, however, produce fruits 2 or more inches in diameter.

These scientists have found among the apple species four kinds of resistant reactions to the scab fungus. One, represented by a clon of *Malus toringo*, shows no scab infection at all on leaves, even when inoculated with spores under ideal conditions. Another, of which a clon of *Malus floribunda*, the common flowering crab, is an example, shows pin-point depressions on the leaves, but the fungus

does not produce spores, hence cannot spread.

A third example is a clon of *Malus sikkimensis*, which develops red circular lesions on the leaves, but still no spores are formed. The fourth type of scab lesion is that exhibited on a clon of *Malus baccata*, the Siberian crab. The lesions are elongated, necrotic areas, and they do produce spores sparsely under favorable conditions, but not nearly as abundantly as on most common apple varieties.

Hough and Shay are now crossing resistant small-fruited species with the large-fruited varieties, such as Twenty Ounce and Wolf River. Probably several generations of crossing will be required to build up fruit size and quality in new varieties. The larger-fruited resistant species are being crossed with high-quality varieties such as Jonathan, McIntosh, and Delicious. It is hoped that from these crosses commercially desirable scab resistant individuals can be selected and tested.—E.S.B.

AMERICAN FRUIT GROWER



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EXECUTIVE CHAMBERS
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And most important — we know where we're going! Our leaders in business, industry, agriculture and education, through their Resources Development Council, are charting a course toward a sound, stable future for our people.

Look long at Colorado — it offers you much!

Lee Knous
Governor



Lee Knous

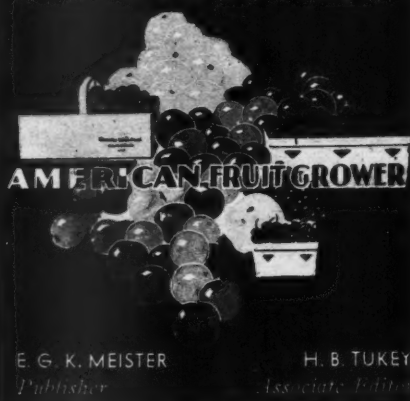
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UNION PACIFIC RAILROAD
Road of the Daily Streamliners

EDITORIAL PAGE



E. G. K. MEISTER
Publisher

H. B. TUKEY
Associate Editor

Truckers and the ICC

FARMERS have long enjoyed certain rights under the Motor Carrier Act of 1935 as administered by the Interstate Commerce Commission. Exemption of trucks used to transport agricultural commodities from ICC regulation has made it possible for the farmer to transport products at a low rate. In some cases, fruit growers have taken advantage of this exemption by forming co-operative trucking pools.

The law does not provide exemption, however, for trucks hauling products *manufactured* from agricultural commodities. Canned apple juice, for instance, is non-exempt, but what about pitted cherries, frozen strawberries, de-fuzzed peaches, pre-packaged apples? Are these manufactured?

In the "Harwood" case of last fall, ICC ruled that a trucker must have a permit to haul washed and packaged spinach, saying, in effect, that these commodities had been manufactured. Since a decision like this threatens to throw all agricultural commodities into the non-exempt classification, vigorous representations were made and in a release to the public the Commission agreed to re-open the Harwood case and have a complete hearing which would be called in not less than 90 days.

It would be wise for fruit growers to watch for the announcement of the hearing and through local and state organizations insure that adequate representation is on hand. Truck transportation has been of great advantage not only in helping to keep transportation costs down but also in opening up countless small city markets to perishables. Motor hauling must not be so fettered and bound up by restrictions that it loses its value to fruit growers.

Coming, A Fruit Picking Machine

ANYONE WHO HAS labored with picking tree fruits has imagined in fantasy a machine which would do this slow and tiresome job. Yet, it is today in the realm of possibility that such a machine will be developed. Whoever thought that cotton could be picked mechanically, and yet, today, a successful cotton picker is being manufactured and International Harvester Company expects to produce 1,000 of these machines by November 1. To see the cotton picker in operation is to see magic. Apparently there is no limit to what can be accomplished.

Dr. Roy Smith of the University of California is making a comprehensive study of orchard picking and packing problems. He is proceeding under the auspices of the Giannini Foundation and the University of California and has two full time engineers working with him. As reported in CITRUS LEAVES, the official publication of the Mutual Orange Distributors, Dr. Smith's first effort in the direction of solving the problem of picking oranges was the testing of a machine which had been used successfully in picking peaches. The pickers worked on booms which lifted them up and down and in and out of the trees. This machine, using eight men, equalled with satisfaction the ladder operation requiring 30 men.

There are, apparently, many short cuts in picking and handling fruit which can be done mechanically and which save much time and labor during the busiest period of the year in the orchard or grove.

Fruit Production at a Glance

	1937-46	1947	July 1, Est. 1948
Apples bushels	115,058,000	113,041,000	100,049,000
Peaches bushels	66,725,000	82,603,000	70,384,000
Pears bushels	30,222,000	35,312,000	26,354,000
Grapes bushels	2,701,000	3,072,000	3,009,000
Plums and Prunes tons (fresh)	723,140	675,000	647,800
Cherries tons	170,000	173,000	194,000
CITRUS			
	1936-45	1946-47	1947-48
Oranges boxes	83,488,000	113,980,000	111,680,000
Grapefruit boxes	44,593,000	59,640,000	62,860,000



The Fruit Grower Is A Food Chemist

SCIENTISTS at the University of California tell us that great events may be just around the corner in the feeding of the world's population. And in these suggestions lie the hopes that some of the wars and bloodshed that have dogged the human race from the beginning, in its hunt for food, may be brought to an end. They show that the production of plant life in the ocean and the waters of the earth is ten times greater than the production of plants on land. Someday, they suggest, sea life may be turned into an edible form for human beings other than through the intermediate processes of fish and other sea food. Someday, too, these scientists say, man may be able to control plant life so that it will produce sugars, or starches, or fats at his will.

All of this makes fascinating reading, but it brings to mind the fact that farmers and fruit growers and agricultural workers generally are already doing a pretty good job at this sort of thing. They may not realize it fully, but they are none the less the modern food chemists.

For example, the fruit grower is told that certain varieties of strawberries, as the Robinson, carry a high content of vitamin C. The man who raises such varieties is helping to provide his fellow man with the vitamin C he needs to live. The citrus grower is the manufacturer of needed minerals and vitamins. The apple grower provides the pectic substances and the salts and some additional vitamins. The grape grower, the plum grower, the growers of apricots, nuts, pears, currants, and other fruit crops are all at this business.

Fruits that have been exposed to the sunshine—the fruits of color and quality—are most likely to have the maximum of health giving nutrients. The peaches from well-thinned, well-fertilized, and well-cared-for trees are most likely to be high in sugars and minerals and other of nature's gifts. The over-loaded, undernourished tree is likely to produce not only an insipid article but also one that is lacking in the nutritive values for which it is purchased and used. The habit of the human race in desiring fruits to eat is more than mere satisfied luxury and fad. It is the instinctive desire to supply the human body with what it needs.

In all of this, the fruit grower plays an important part. He is more than the producer of articles to sell. He is a food chemist—wresting from the soil and the water and the air some of the materials essential to human life and providing them all nicely packaged in tasty and attractive form.

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Apple

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This offers amazing fruit developments... improvements that astound even long-experienced orchardists. Yes, miracle fruits discovered and improved by the renowned horticultural wizards, Burbank and Stark. Fruits that are marvels of flavor, goodness, and rich color... premium fruit you can grow in unbelievably short time and greater abundance with no extra care.

What makes these apples, peaches, pears, plums, cherries, apricots, grapes so sensational is that they are propagated direct-in-line from Record-Bearing parent trees... selected as the cream of the crop for bearing more bushels of finer fruit at younger age. Imagine trees, many bearing up to 30 bushels of premium fruit—bearing 1 to 3 years younger than ordinary trees. These are not fruit trees that require years of patient waiting, special soils, or pampering. Many varieties are so different from other known varieties that they have been awarded U. S. Patents or Trade-Marks. Unlike many varieties, these trees flourish almost anywhere farm crops grow, if given ordinary care. Health authorities are urging people to eat twice as much fruit. Yet the new United States census of agriculture reveals an alarming fruit shortage—only one-third as many apple trees as in 1910... and 61 million more people to feed. The U. S. government is urging more home planting of fruit trees.

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